

A I R L I N K

No matter whether voice and data transmissions must travel over 30 miles of sea swells, wide canyons or busy boulevards, AirLink products provide consistently clear and reliable communications.

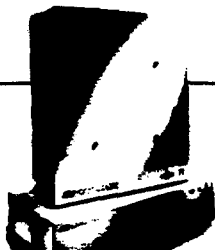
The AirLink Virtual Wire.

Cylink's AirLink family of digital microwave radio modems is based on a technology that offers all the advantages of reliable service without the monthly bill or limitations of wires. • The AirLink family of wireless modems — point-to-point/point-to-multi-point, AirLink T1/E1, and the AirLink Bridge — provide a cost-effective alternative to wires with their full-featured, error-free digital pathways and easy installation. Through a powerful over-the-air protocol, many links can be distributed from a hub or base station, making AirLink particularly suitable for local distribution from wired, fiber and satellite networks. And for those applications that have a

full line-of-sight, crisp, clear communications is accomplished up to 30 miles/50 km, and further with the addition of repeaters. • AirLink products are interoperable with all popular communications technology — bridges, routers, multiplexers and phone systems — and completely transparent to the end-user. Its full-duplex operation, combined with a unique interface and other design enhancements, allows customers to plug into AirLink as if they were using a leased wired line provided by the local telephone company.

Cylink Chips

Cylink designs custom ASICs for information security and wireless communications products.



AirLink T1/E1 Radios

Rugged, outdoor design T1/E1 radios are remotely configurable and allow connections and performance to be monitored from the desktop.

AirLink spread spectrum products transmit up to 30 miles and will extend further with repeaters.



CYLINK LOCATIONS

The Rest of the Cylink Story

A Quality Attitude.

When customers purchase a system from Cylink, they acquire more than a product — they get the knowledge gained from years of technical expertise in information security and wireless communications. Cylink is committed to providing complete and comprehensive customer support with a single objective — developing and maintaining long-term relationships with the customer. • Cylink customer service includes pre-sales support, application guidance and consulting, installation services, product training, extended warranties, return and repair service, on-site maintenance and support, 24-hour toll-free hotline, qualified telephone technical support and emergency spares stocking services. • Customers may add maintenance and service contracts that provide extended warranties, emergency replacement services, product upgrades and on site support coverage, 24 hours each day, every day. Cylink has six service and support centers around the world in addition to factory-trained distributors and VARs in nearly 70 countries. Service Centers are located in the United Kingdom, Singapore, India, Pakistan, Russia and the U.S.

Wherever You Need Us, There We Are.

Meeting the challenges of the international market demands a business approach that is both comprehensive and flexible. Being a successful global provider of information security and wireless products is the highest priority at Cylink, and the best way to be successful is to do the job well. Cylink personnel are trained to understand every aspect of the business environment, local market and technical requirements — from product design, import/export regulations to shipping and service — in all countries where Cylink products are sold and serviced. • Cylink wireless products are designed with each country's characteristics and requirements in mind, whether it involves regional regulations or unusual technical requirements. Since Cylink remote wireless communications systems must adhere to local requirements, Cylink has a separate network of regional distributors for these products to ensure that each customer receives the highest quality attention possible for the life of the product.

**Cylink Corporate
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Other Cylink locations
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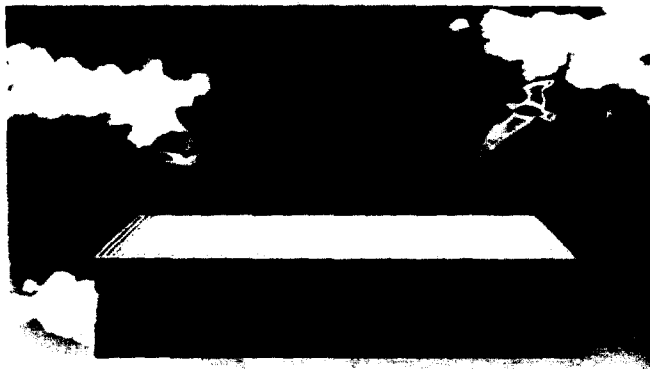
AIRLINK™

19.2-512 KBPS

DIGITAL

MICROWAVE RADIO

SPECIFICATIONS



Cylink's family of products provides secure, reliable, and flexible connectivity using spread spectrum technology.

General

■ Description

■ Frequency

■ Bandwidth

■ Modulation

■ Spread Spectrum

■ Antenna

■ Power

■ Emissions

■ Weight

Connectivity

■ Front panel

■ Rear panel

Rear Connections

■ Type

■ Power

■ DTE V.I.

■ DTE RS-485

■ DTE RS-232

■ Antenna

■ Burst synchronizer

AIRLINK L-BAND 902-928 MHz

Model	Data Rate (kbps)		Transmitter Bandwidth (MHz)	Receiver Sensitivity (dBm) at 10 ⁻⁶ BER	Number of RF Channels	Output Power [†]	
	Asynchronous (max.)	Synchronous				dBm	mW
19MP-E (Multipoint)	19.2	19.2, 9.6 4.8, 2.4, 1.2	1.5	-101*	16	29	800
64MP and 64MP-E (Multipoint)	19.2	64, 56, 19.2 9.6, 4.8, 2.4, 1.2	5.1	-95*	5	29	800
128	32	128, 112	10.2	-92	2	29	800
VF**	Voice Frequency		-	-	-	-	-

AIRLINK S-BAND 2.400-2.4835 GHz

Model	Data Rate (kbps)		Transmitter Bandwidth (MHz)	Receiver Sensitivity (dBm) at 10 ⁻⁶ BER	Number of RF Channels	Output Power [†]	
	Asynchronous (max.)	Synchronous				dBm	mW
64SMP (Multipoint)	19.2	64, 56, 19.2 9.6, 4.8, 2.4, 1.2	5.1	-95*	15	28	650
128S	32	128, 112	10.2	-92	7	28	650
256S	64	256, 224	20.5	-89	4	28	650
384S	96	384, 336	30.7	-87	2	28	650
512S	128	512, 448	41.0	-86	2	28	650

[†] At maximum power excluding antenna gain. Power levels set at installation must conform to local regulations.

* Error correction improves stated receiver sensitivity by 3 dB in Multipoint models at low data rates.

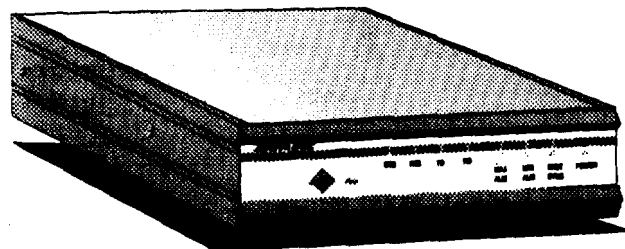
** See AirLink VF Wireless Modem data sheet for detailed specification.

Other Cylink locations throughout the USA include:
Washington DC & New York metro areas, Atlanta, Dallas, Chicago,
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Cylink offers sales and service through a worldwide network of distributors and VARs

AIRLINK™



PRO 64S

DIGITAL

MICROWAVE RADIO

SPECIFICATIONS



Cylink's family of AirLink wireless communication products provides data and voice connectivity using spread spectrum radio technology, with integrated software management.

Features and Capabilities

- Robust, reliable, high quality wireless data linking
- Point-to-point and point-to-multipoint
- Operating range up to 30 miles (50 km) between units
- Software management - local and remote (via modem) monitoring, diagnostic, and maintenance capabilities
- Flexible, interactive user interface through ASCII terminal
- Easily modified configuration parameters
- Continuous transmission data error-checking
- Receive Signal Quality (RSQ)

General Specifications

- | | |
|--------------------------|--|
| ■ Synchronous data rate | 64/56/19.2/9.6/4.8 kbps |
| ■ Asynchronous data rate | 19.2 kbps max. |
| ■ Bit-error rate | Better than 10^{-6} unfaded |
| ■ Operating frequency | 2.400-2.4835 GHz |
| ■ Modulation type | MSK |
| ■ Spreading method | Direct sequence; 8 codes |
| ■ RF channels | 20 |
| ■ Transmit output power | 650 mW (28 dBm) max. |
| ■ Transmit bandwidth | 4.0 MHz |
| ■ Receive sensitivity | -95 dBm @ 10^{-6} BER (up to 3 dB improvement w/FEC) |
| ■ Antenna options | 24 dBi Semi-Parabolic,
13 dBi Yagi,
8 dBi Omni Co-linear Array |
| ■ Dimensions | 2.4 H x 8.3 W x 10.0 D inches
61 H x 211 W x 254 D mm |
| ■ Weight | 8 lbs (3.6 kg) |
| ■ Operating temperature | 0° to 50° C (32° to 122° F) |
| ■ Humidity | 10 to 95% non-condensing |

Front Panel Indicators

- | | |
|---------------------|-------------------------|
| ■ Power | ■ Carrier Detect (DCD) |
| ■ Burst Sync Source | ■ Receive Data (RD) |
| ■ Major Alarm | ■ Transmit Data (TD) |
| ■ Minor Alarm | ■ Request to Send (RTS) |

Rear Panel Connectors

- | | |
|-------------------------|------------------------|
| ■ Power | 5-Pin DIN female |
| ■ Software Management | DB9 male (dual) |
| ■ DTE RS-232 | DB25 female |
| ■ DTE EIA-530/V.35/V.11 | DB25 female |
| ■ Antenna | N Type female |
| ■ Burst Synchronization | 6-Pin Captive Terminal |

Power

- | | |
|---|--|
| ■ AC Power Supply (external, standard) | |
| Input | 100-250 VAC @ 50/60 Hz,
0.3-0.7A |
| Approvals | CSA, UL, VDE, IEC |
| Dimensions | 2.0 H x 3.4 W x 5.9 L inches
(50 H x 87 W x 150 L mm) |
| Weight | 1.3 lb (0.6 kg) |
| ■ DC Power Supply (external, optional) | |
| Available for | 12, 24, and 48 VDC |
| (See D.C. Power Supply data sheet for specifications) | |

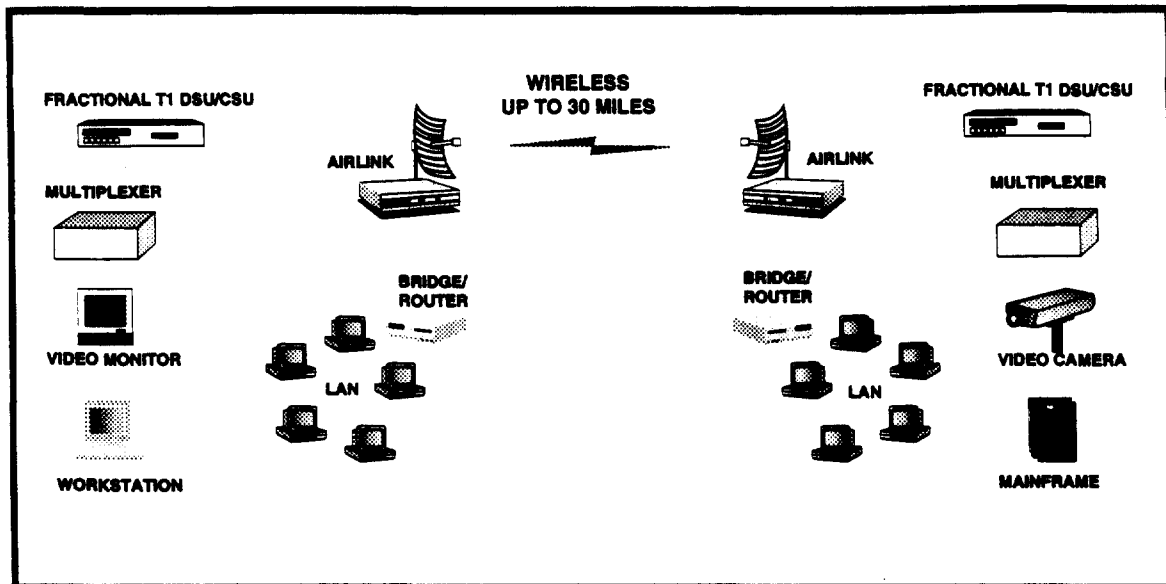
Certifications

- (in process)

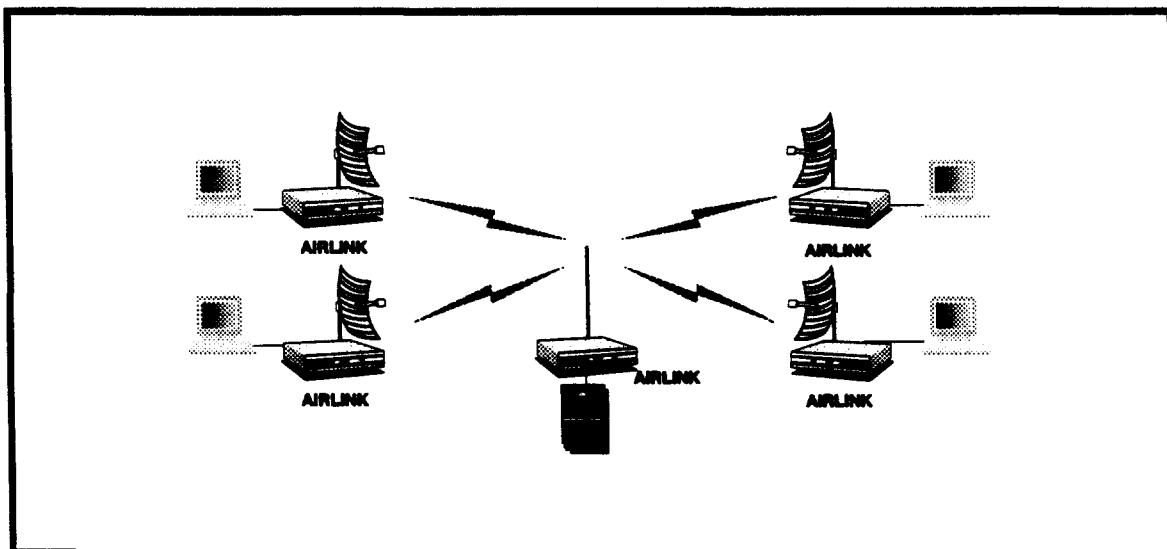
Customer Support

- Worldwide sales, service, and distribution
- 12-month warranty
- Accessory list available

Typical Applications



Point-to-Point. In a point-to-point system, two AirLink Pro 64S microwave radios establish a link that can carry data connecting computers, LANs, voice/data multiplexers, video codecs, and other digital communication devices at a data rate up to 64 kbps. The point-to-point topology could be expanded to a "star" configuration using multiple point-to-point links converging at a central site.



Point-to-Multipoint. In a point-to-multipoint system, the AirLink Pro 64S microwave radios provide a link between a host computer and two or more remote computer devices. The remote devices are controlled by the central host with a poll-select communication protocol that is transparent to the AirLink microwave radios. Polling is the process of addressing the remote devices by the host computer's software. This scheme provides a full-duplex, point-to-point session within a point-to-multipoint environment.

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Specifications subject to change without notice. Performance specifications are for optimum conditions and may be affected by location, environment, and other operating considerations.
Cylink is a registered trademark and AirLink is a trademark of Cylink Corporation.
FCC Regulations require that these devices be professionally installed by a person knowledgeable in electronics and trained in the correct installation of this device.